Special Issue

Sustainable Mining: Advancements, Challenges and Future Directions

Message from the Guest Editors

Sustainable mining practices are the future of the extractive industry. The challenges are technical and extra-technical. The large-scale mines of the future will always deal with lower mineral grades and deeper deposits, facing issues with technical viability and the safety and well-being of the operators. The deep deposits will provide stronger rocks, which will increase the energy demand for the comminution processes: the sources for this energy will have to shift to clean and renewable. On the other hand, the new deposits available are rich in grade, close to the surface and are of a small scale. The artisanal and small-scale mining will take a larger and larger role in the mineral value chain, facing the environmental and social issues that this size of mining carries. The value chain will shift from a linear to a circular economy, which will include the objective of zero-waste mining. This Special Issue focuses on the advancements, challenges, and future directions of sustainable mining. We invite original research articles, reviews, and other related contributions to this Special Issue.

Guest Editors

Prof. Dr. Jacopo Seccatore

Metallurgy and Mining Engineering Department, Universidad Catolica del Norte, Antofagasta 1270398, Chile

Prof. Dr. Tatiane Marin

Department of Metallurgical and Materials Engineering, Universidad Técnica Federico Santa Maria, Santiago, Chille

Deadline for manuscript submissions

1 November 2025

Minerals

an Open Access Journal by MDPI

Impact Factor 2.2
CiteScore 4.4

mdpi.com/si/204578

Minerals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
minerals@mdpi.com

mdpi.com/journal/minerals

Minerals

an Open Access Journal by MDPI

Impact Factor 2.2
CiteScore 4.4

mdpi.com/journal/minerals

About the Journal

Message from the Editor-in-Chief

Minerals welcomes submissions that report basic and applied research in mineralogy. Research areas of traditional interest are mineral deposits, mining, mineral processing and environmental mineralogy. The journal footprint also includes novel uses of elemental and isotopic analyses of minerals for petrology, geochronology and thermochronology, thermobarometry, ore genesis and sedimentary provenance. Contributions are encouraged in emerging research areas such as applications of quantitative mineralogy to the oil and gas, manufacturing, forensic science, climate change, geohazard and health sectors.

Editor-in-Chief

Prof. Dr. Leonid Dubrovinsky
Bayerisches Geoinstitut, University Bayreuth, D-95440 Bayreuth, Germany

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), GeoRef, CaPlus / SciFinder, Inspec, Astrophysics Data System, AGRIS, and other databases.

Journal Rank:

JCR - Q2 (Mining and Mineral Processing) / CiteScore - Q1 (Geology)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.2 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).

MDPI